

# MANUFACTURING EXTENSION PARTNERSHIP

## Success Stories from the Field

### White Knight Engineered Products

#### Alabama Technology Network

#### White Knight Engineered Products Begin Lean Transformation

##### Client Profile:

White Knight Engineered Products (White Knight) creates textile solutions for some of the most demanding industries in today's business world. The company's products include a range of coveralls for use in controlled environments; blankets, pillowcases, and head rest covers for enhanced passenger comfort on planes, trains, and buses; and face mask technology for use in a variety of industries. Located in Childersburg, Alabama, White Knight currently employs more than 100 people.

##### Situation:

White Knight, like many other textile manufacturers, has found offshore competition a serious threat to its market share. The company even has a plant in Mexico that produces stock items, and it still feels the pressure from Asia. The Alabama facility has become a custom products manufacturer. To retain its market share, White Knight realized that it would have to adopt lean manufacturing practices. The company enlisted the help of the Alabama Technology Network (ATN), a NIST MEP network affiliate, to develop a lean transformation strategy.

##### Solution:

ATN introduced White Knight to lean manufacturing principles through a hands-on lean simulation for the entire manufacturing plant. Next, key managers, supervisors, and team leaders completed a lean certificate program to give them a foundation upon which to build their lean program. Finally, using the hands-on approach, ATN led a kaizen implementation exercise on the factory floor, transforming an assembly line to lean.

The new layout changed the process from nine operators in batch production to five operators in continuous flow production. ATN implemented point-of-use storage for each cell, thereby putting everything needed to produce products within arm's reach. Next, a conversion from single machine stations to multiple machine stations, combined with a line balancing initiative, virtually eliminated bottlenecks.

##### Results:

- \* Reduced floor space for this product line from 1,400 to 640 square feet.
- \* Virtually eliminated repair and scrap.
- \* Increased production rate on one product from 50 units per day to 250 units per day.
- \* Increased production rate on another product from 55 units per day to over 90 units per day.
- \* Reduced lead times, set-up times, and inventory to increase bottom line.
- \* Improved product quality while filling customer orders more quickly.
- \* Increased sales orders from the two largest customers.
- \* Dramatically increased throughput.

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\* Potentially saving 100 jobs when fully transformed.

### **Testimonial:**

"The Alabama Technology Network's approach to the manufacturing process is all about using common sense. Our people really liked working with them. They sparked our employees to look at different ways to remove waste."

Lucinda Hodge, Vice President of Operations